

#2

Access DB# 223709

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sim J. Lee Examiner #: 76060 Date: 5-1-2001  
Art Unit: 1752 Phone Number 301 21333 Serial Number: 101803, 446  
Mail Box and Bldg/Room Location: 9C15 Results Format Preferred (circle): PAPER DISK E-MAIL  
(Rem)

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: P12. See B-6. SCIENTIFIC REFERENCE BR  
Sci & Tech Inf. Ctr.

Inventors (please provide full names): \_\_\_\_\_ MAY 7 RECD

Earliest Priority Filing Date: \_\_\_\_\_ Pat. & T.M. Office

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search for the oligomer (polymer)  
of formula (2) in Cl. # 7

### STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>ES</u>	NA Sequence (#) _____	STN _____
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic _____	Dr.Link _____
Date Completed: <u>5-10-07</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: _____	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: _____	Other _____	Other (specify) _____

=> FILE REG

FILE 'REGISTRY' ENTERED ON 10 MAY 2007

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=> D HIS

FILE 'LREGISTRY'

L1 STR

FILE 'REGISTRY'

L2 33 S L1

FILE 'HCAPLUS'

L3 7510 S TOYODA ?/AU

L4 11639 S IMAMURA ?/AU

L5 819 S TOMARU ?/AU

L6 10537 S KURIHARA ?/AU

L7 75 S ENBUTSU ?/AU

L8 3541 S HAYASHIDA ?/AU

L9 816 S MARUNO ?/AU

L10 0 S L3 AND L4 AND L5 AND L6 AND L7 AND L8 AND L9

L11 0 S L3 AND L4 AND L5 AND L6 AND L8 AND L9

L12 0 S L3 AND L4 AND L5

L13 343229 S OPTIC?/TI

L14 25554 S WAVEGUIDE?/TI

L15 30534 S PHOTOLENS?/TI

L16 76 S L13 AND L14 AND L15

L17 1 S L16 AND (L3-L9)

SEL RN

FILE 'REGISTRY'

L18 2 S E1-E2

SEL L18 1 RN

L19 1 S E3

L20 2 POLYLINK L19

L21 STR L1

L22 SCR 2043

L23 1 S L21 AND L22

L24 9 S L21 AND L22 FUL

SAV L24 LEE446/A

L25 9 POLYLINK L24

L26 9 S L20 OR L25

FILE 'CAOLD'

L27 0 S L26

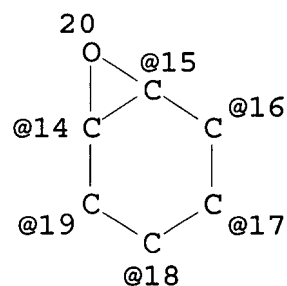
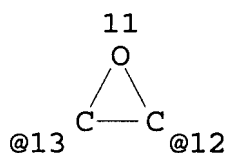
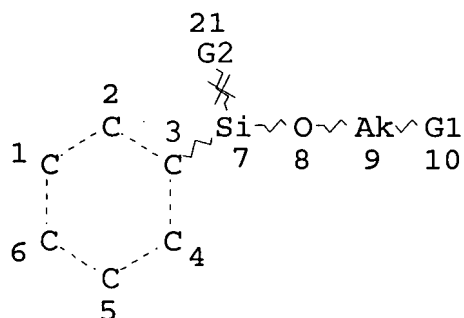
FILE 'ZCAPLUS'

L28 10 S L26

FILE 'REGISTRY'

=&gt; D L24 QUE STAT

L21 STR



VAR G1=13/12/16/17/18/19/14/15

VAR G2=O/CL

NODE ATTRIBUTES:

NSPEC IS RC AT 7

CONNECT IS E2 RC AT 9

DEFAULT MLEVEL IS ATOM

GGCAT IS SAT AT 9

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE

L22 SCR 2043

L24 9 SEA FILE=REGISTRY SSS FUL L21 AND L22

100.0% PROCESSED 677 ITERATIONS

SEARCH TIME: 00.00.01

9 ANSWERS

=&gt; FILE ZCAPLUS

FILE 'ZCAPLUS' ENTERED ON 10 MAY 2007

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=> D L28 1-10 CBIB ABS HITSTR HITRN

L28 ANSWER 1 OF 10 ZCAPLUS COPYRIGHT 2007 ACS on STN

2006:1040484 Document No. 146:8388 Flame retardant epoxy resins based on diglycidyloxymethylphenylsilane. Mercado, L. A.; Reina, J. A.; Galia, M. (Department de Quimica Analitica i Quimica Organica, Universitat Rovira i Virgili, Tarragona, 43007, Spain). Journal of Polymer Science, Part A: Polymer Chemistry, 44(19), 5580-5587 (English) 2006. CODEN: JPACEC. ISSN: 0887-624X. Publisher: John Wiley & Sons, Inc..

AB Silicon-contg. epoxy resins were prepd. from diglycidyloxymethylphenyl silane (DGMPS) and diglycidyl ether of bisphenol A (DGEBA) by crosslinking with 4,4'-diaminodiphenylmethane (DDM). Several DGMPS/DGEBA molar ratios were used to obtain materials with different silicon contents. Their thermal, dynamomech., and flame-retardant properties were evaluated and related to the silicon content. The wt. loss rate of the silicon-contg. resins is lower than that of the silicon free resin. Char yields under nitrogen and air atmospheres increase with the silicon content. The LOI (limited oxygen index) values increased from 24 for a std. com. resin to 36 for silicon-contg. resins, demonstrating improved flame retardancy.

IT 915303-48-9P 915303-49-0P  
(flame retardant epoxy resins based on diglycidyloxymethylphenylsilane)

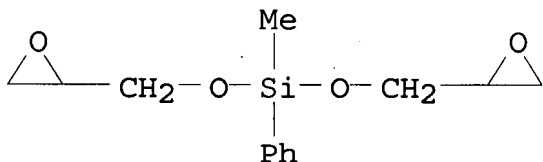
RN 915303-48-9 ZCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 4,4'-methylenebis[benzenamine] and 2,2'-[(methylphenylsilylene)bis(oxymethylene)]bis[oxirane] (CA INDEX NAME)

CM 1

CRN 56347-98-9

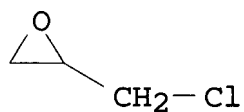
CMF C13 H18 O4 Si



CM 2

CRN 106-89-8

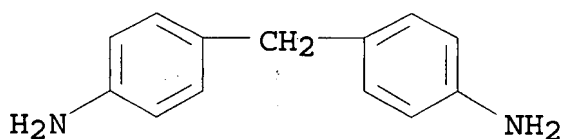
CMF C3 H5 Cl O



CM 3

CRN 101-77-9

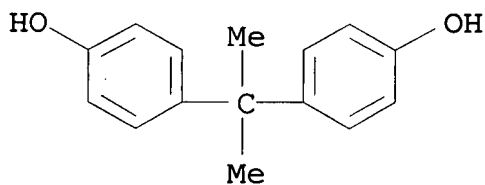
CMF C13 H14 N2



CM 4

CRN 80-05-7

CMF C15 H16 O2



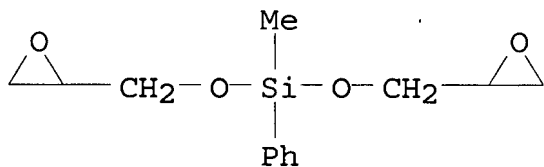
RN 915303-49-0 ZCAPLUS

CN Benzenamine, 4,4'-methylenebis-, polymer with 2,2'-  
[(methylphenylsilylene)bis(oxymethylene)]bis[oxirane] (CA INDEX  
NAME)

CM 1

CRN 56347-98-9

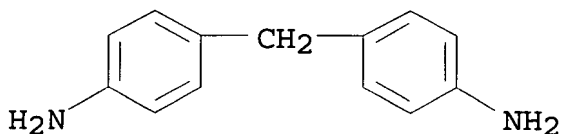
CMF C13 H18 O4 Si



CM 2

CRN 101-77-9

CMF C13 H14 N2



IT 915303-48-9P 915303-49-0P  
(flame retardant epoxy resins based on  
diglycidylmethoxyphenylsilane)

L28 ANSWER 2 OF 10 ZCAPLUS COPYRIGHT 2007 ACS on STN  
2006:935094 Document No. 145:471938 Silicon-containing flame retardant  
epoxy resins: Synthesis, characterization and properties. Mercado,  
L. A.; Galia, M.; Reina, J. A. (Departament de Quimica Analitica i  
Quimica Organica, Universitat Rovira i Virgili, Campus Sescelades,  
Marcel·li Domingo s/n.Tarragona, E-43007, Spain). Polymer  
Degradation and Stability, 91(11), 2588-2594 (English) 2006. CODEN:  
PDSTDW. ISSN: 0141-3910. Publisher: Elsevier Ltd..

AB Epoxy resins with different silicon contents were prepd. from  
silicon-contg. epoxides or silicon-contg. prepolymers by curing with  
4,4'-diaminodiphenylmethane. The reactivity of the silicon-based  
comps. toward amine curing agents was higher than that of the  
conventional epoxy resins. The Tg of the resulting thermosets was  
moderate and decreased when the silicon content increased. The  
onset decompn. temps. decreased and the char yields increased when  
the silicon content increased. Epoxy resins had a high LOI value,  
according to the efficiency of silicon in improving flame  
retardance.

IT 236094-15-8P 914093-53-1P  
(prepn. and properties of silicon-contg. flame retardant epoxy  
resins)

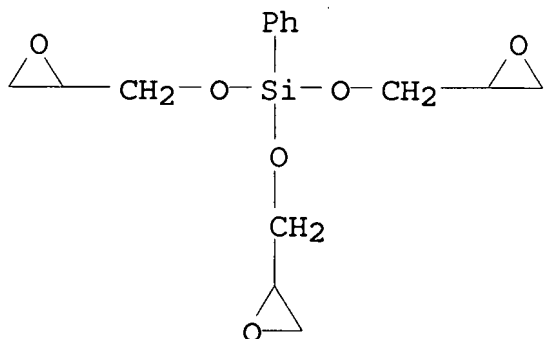
RN 236094-15-8 ZCAPLUS

CN Benzenamine, 4,4'-methylenebis-, polymer with  
tris(oxiranylmethoxy)phenylsilane (9CI) (CA INDEX NAME)

CM 1

CRN 6717-64-2

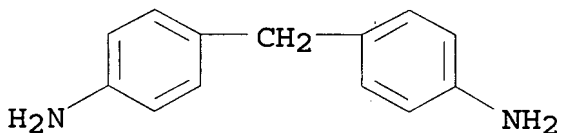
CMF C15 H20 O6 Si



CM 2

CRN 101-77-9

CMF C13 H14 N2



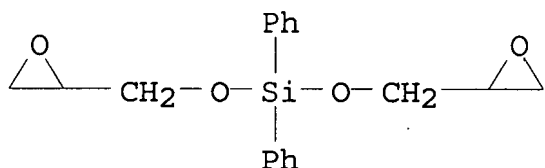
RN 914093-53-1 ZCAPLUS

CN Benzenamine, 4,4'-methylenebis-, polymer with  
bis(oxiranylmethoxy)diphenylsilane (9CI) (CA INDEX NAME)

CM 1

CRN 6689-25-4

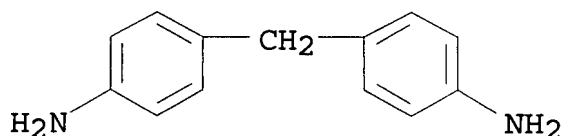
CMF C18 H20 O4 Si



CM 2

CRN 101-77-9

CMF C13 H14 N2



IT 236094-15-8P 914093-53-1P

(prepn. and properties of silicon-contg. flame retardant epoxy resins)

L28 ANSWER 3 OF 10 ZCAPLUS COPYRIGHT 2007 ACS on STN

2002:727478 Document No. 137:270178 Production method of optical waveguide coupler with oligomer. Haga, Yoshimasa; Imamura, Saburo; Tomaru, Akira; Hikita, Makoto; Hashimoto, Kazuko; Yamauchi, Atsushi; Sakuma, Ayako; Michikgchi, Masayuki; Tomiyoshi, Chie (NTT Advanced Technology Corp., Japan). Jpn. Kokai Tokkyo Koho JP 2002277662 A 20020925, 11 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-72920 20010314.

AB The invention refers to a prodn. method of an optical waveguide coupler using a reactive oligomer with easy pattern formation, heat resistance and resistance to moisture, small birefringence, and superior processability to form thick cores or cores with different diams. on the same waveguide for simple prodn. of a easily connected coupler.

IT 220341-23-1

(prodn. method of optical waveguide coupler)

RN 220341-23-1 ZCAPLUS

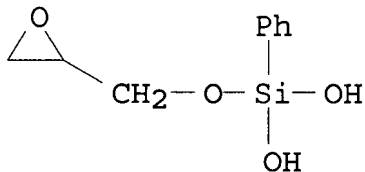
CN Silanediol, (oxiranylmethoxy)phenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 220341-22-0



CMF C9 H12 O4 Si



IT 220341-23-1

(prodn. method of optical waveguide coupler)

L28 ANSWER 4 OF 10 ZCAPLUS COPYRIGHT 2007 ACS on STN

2000:579520 Document No. 133:282472 Phosphorus-containing epoxy resins for flame retardancy. V. Synergistic effect of phosphorus-silicon on flame retardancy. Hsiue, Ging-Ho; Liu, Ying-Ling; Tsiao, Jun (Department of Chemical Engineering, National Tsing Hua University, Hsinchu, 30043, Taiwan). Journal of Applied Polymer Science, 78(1), 1-7 (English) 2000. CODEN: JAPNAB. ISSN: 0021-8995. Publisher: John Wiley & Sons, Inc..

AB Epoxy resins contg. P and(or) Si were prepd. from P/Si-contg. epoxides and diamine curing agents. The flame-retardant properties of the P/Si-contg. epoxy resins were studied. Furthermore, the P-Si synergistic effect on the limiting O index (LOI) enhancement and increasing flame retardancy of the epoxy materials were demonstrated. While under flame, P provides the tendency of char formation, and Si provides the enhancement of thermal stability of the char, to show their individual benefit on flame retardancy. Introducing both P and Si together in the epoxy resin compn. brings the success of combining these 2 factors in a flame retardation mechanism. An LOI enhancement from 26 to 36 was obsd. for epoxy resins contg. both P and Si. Moreover, the synergistic effect of P-Si on fire resistance can be further leveled up by using siloxane reagents to replace silanes. Epoxy resins with a compn. of P epoxides and siloxane diamines exhibited a high LOI value of 41, to demonstrate the high synergistic efficiency of P and Si on flame retardation.

IT 299899-23-3, Bis(3-aminophenyl)phenyl phosphine oxide-triglycidylphenoxy phenyl silane copolymer

(synergism of phosphorus-silicon-contg. epoxy resins for flame retardancy)

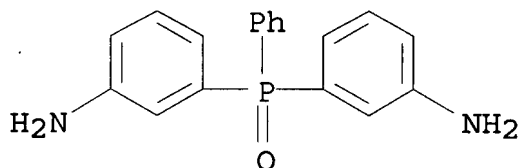
RN 299899-23-3 ZCAPLUS

CN Benzenamine, 3,3'-(phenylphosphinylidene)bis-, polymer with tris(oxiranylmethoxy)phenylsilane (9CI) (CA INDEX NAME)

CM 1

CRN 75925-90-5

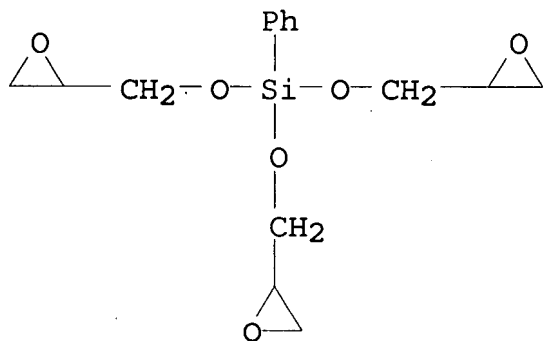
CMF C18 H17 N2 O P



CM 2

CRN 6717-64-2

CMF C15 H20 O6 Si



IT 299899-23-3, Bis(3-aminophenyl)phenyl phosphine  
oxide-triglycidyloxy phenyl silane copolymer  
(synergism of phosphorus-silicon-contg. epoxy resins for flame  
retardancy)

L28 ANSWER 5 OF 10 ZCAPLUS COPYRIGHT 2007 ACS on STN

2000:440193 Document No. 133:81408 Photosensitive optical waveguide  
components and manufacture of optical waveguides. Toyota, Seiji;  
Imamura, Saburo; Tomaru, Akira; Kurihara, Takashi; Enbutsu,  
Akitsugu; Hayashida, Shunichi; Maruno, Toru (Nippon Telegraph and  
Telephone Corp., Japan). Jpn. Kokai Tokkyo Koho JP 2000180643 A  
20000630, 23 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP  
1999-284886 19991005. PRIORITY: JP 1998-283142 19981005.

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

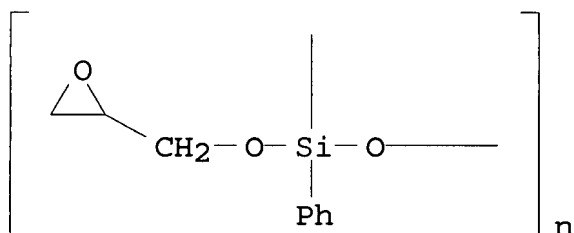
AB The components comprise org. oligomers I, II and III (X, X<sub>1,2</sub> = H, D, halo, alkyl, alkoxy; m = 1-5; R<sub>1</sub> = Me, Et, isopropyl; R<sub>2</sub> = O<sub>1/2</sub>, Me, Et, isopropyl; R<sub>3</sub> = O<sub>1/2</sub>, O(CH<sub>2</sub>)<sub>2</sub>OCH:CHCH<sub>3</sub>; Z = oxirane, bicyclo[4.1.0]heptane; R<sub>4,5</sub> = H, halo, alkyl, alkoxy, trifluoromethyl; X<sub>3,4</sub> = alkylene, alkyleneoxy, oxyalkylene. arom. ring).

IT 220341-25-3

(photosensitive optical waveguide components and manuf. of optical waveguides)

RN 220341-25-3 ZCAPLUS

CN Poly[oxy[(oxiranylmethoxy)phenylsilylene]] (9CI) (CA INDEX NAME)



IT 220341-25-3

(photosensitive optical waveguide components and manuf. of optical waveguides)

L28 ANSWER 6 OF 10 ZCAPLUS COPYRIGHT 2007 ACS on STN

2000:374470 Document No. 133:121046 Characterization and properties of new silicon-containing epoxy resin. Wang, W. J.; Perng, L. H.; Hsiue, G. H.; Chang, F. C. (Department of Chemical Engineering, National Tsing Hua University, Hsinchu, 300, Taiwan). Polymer, 41(16), 6113-6122 (English) 2000. CODEN: POLMAG. ISSN: 0032-3861. Publisher: Elsevier Science Ltd..

AB A new epoxy monomer, phenyltriglycidoxysilane (I) was synthesized. By curing of I, Epon 828 (II), and DER 732 (III) with 4,4-diaminodiphenylmethane, the curing rate and conversion efficiency of these epoxy resins are in the order of I > II > III. In the mixed epoxy system of I/II/III, homogeneous products were obtained from all proportions. In addn., the glass transition temp. of the blend decreased with increasing amt. of I from 140 to 100°. By using TGA in a N environment, the onset decompn. temp. of the silicon-contg. epoxy resin system of I is 80° lower than that of II, and the decompn. of I is a 2-stage process with max. wt.-loss rates at 330 and 430°, resp. The 1st-stage involves the breaking of the silicon-contg. group in I and the 2nd-stage is carbonization. In the 2nd-stage of carbonization,

the temp. for max. wt.-loss rate was 15° higher than that of the II in the 1st stage. This result indicated that the silicon-contg. group is in favor of the carbonization mechanism, and the solid char yield at 800° for I is 40 wt%. Based on EDX anal. on the surface elements, the presence of Si and C was indicative of the above observation. In addn., the result by using TGA in an air environment showed that the Si-contg. C residue is superior in preventing oxidative burning. The high limiting O index (LOI) of I at 35 is considered as an excellent flame retardant in the epoxy system.

IT 236094-15-8P, 4,4'-Diaminodiphenylmethane-phenyltriglycidoxysilane copolymer  
(characterization and properties of new silicon-contg. epoxy resin fireproofing agents)

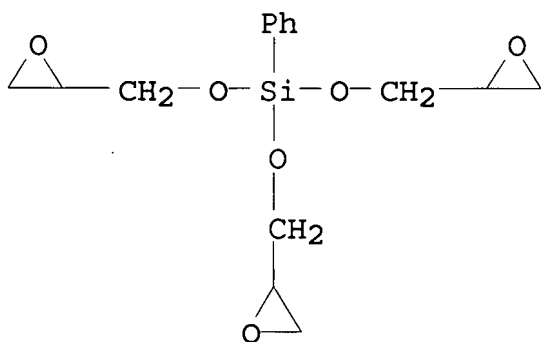
RN 236094-15-8 ZCAPLUS

CN Benzenamine, 4,4'-methylenebis-, polymer with tris(oxiranylmethoxy)phenylsilane (9CI) (CA INDEX NAME)

CM 1

CRN 6717-64-2

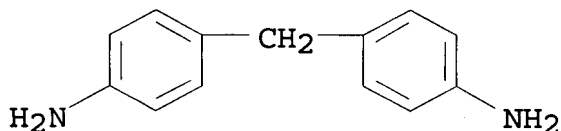
CMF C15 H20 O6 Si



CM 2

CRN 101-77-9

CMF C13 H14 N2

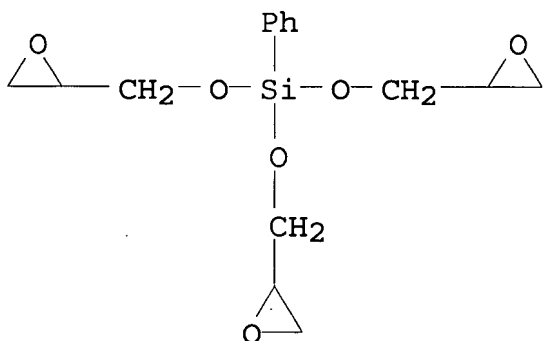


IT 77023-61-1P, Poly(phenyltriglycidoxysilane)  
 (epoxy resin blends; characterization and properties of new  
 silicon-contg. epoxy resin fireproofing agents)  
 RN 77023-61-1 ZCAPLUS  
 CN Silane, tris(oxiranylmethoxy)phenyl-, homopolymer (9CI) (CA INDEX  
 NAME)

CM 1

CRN 6717-64-2

CMF C15 H20 O6 Si



IT 236094-15-8P, 4,4'-Diaminodiphenylmethane-  
 phenyltriglycidoxysilane copolymer  
 (characterization and properties of new silicon-contg. epoxy  
 resin fireproofing agents)  
 IT 77023-61-1P, Poly(phenyltriglycidoxysilane)  
 (epoxy resin blends; characterization and properties of new  
 silicon-contg. epoxy resin fireproofing agents)

L28 ANSWER 7 OF 10 ZCAPLUS COPYRIGHT 2007 ACS on STN  
 1999:374114 Document No. 131:144879 Synthesis, characterization,  
 thermal and flame-retardant properties of silicon-based epoxy  
 resins. Hsiue, Ging-Ho; Wang, Wu-Jing; Chang, Feng-Chih (Department  
 of Chemical Engineering, National Tsing Hua University, Hsinchu,  
 300, Taiwan). Journal of Applied Polymer Science, 73(7), 1231-1238  
 (English) 1999. CODEN: JAPNAB. ISSN: 0021-8995. Publisher: John  
 Wiley & Sons, Inc..

AB An oxirane triglycidyl Ph siloxane (TGPSO) monomer and corresponding  
 silicon-contg. epoxy resins were synthesized and characterized. The  
 activation energy of curing of TGPSO with 4,4'-  
 diaminodiphenylmethane (DDM), 4,4'-diaminodiphenylsulfone, and  
 dicyanodiamide, is 180, 196.5, and 154 kJ/mol. The curing reaction  
 of TGPSO with diamines is detd. to be a first-order reaction through

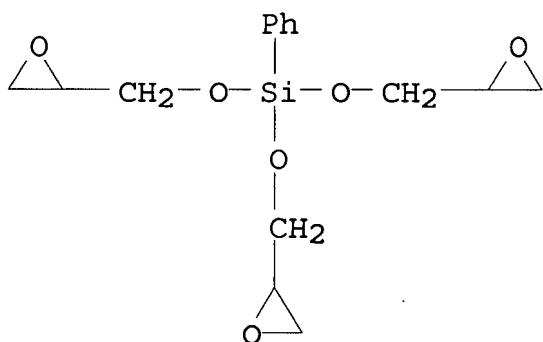
means of Arrhenius plots. The introduction of the silicon-contg. group results in higher curing reactivity. The TGPSO-DDM resin possesses higher char yield and higher limiting oxygen index (LOI = 35) than com. epoxy resins, confirming the usefulness of these silicon-contg. epoxy resins as flame retardants. Char yields and LOI measurements demonstrate that incorporating silicon into epoxy resins leads to improved flame retardancy.

IT **236094-15-8P**, 4,4'-Diaminodiphenylmethane-Phenyltriglycidoxysilane copolymer  
 (prepn. of siloxane epoxy monomer and curing kinetics with diamines and flame-retardancy of resulting resins)  
 RN 236094-15-8 ZCAPLUS  
 CN Benzenamine, 4,4'-methylenebis-, polymer with tris(oxiranylmethoxy)phenylsilane (9CI) (CA INDEX NAME)

CM 1

CRN 6717-64-2

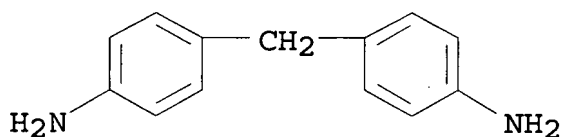
CMF C15 H20 O6 Si



CM 2

CRN 101-77-9

CMF C13 H14 N2



IT **236094-15-8P**, 4,4'-Diaminodiphenylmethane-Phenyltriglycidoxysilane copolymer

(prepn. of siloxane epoxy monomer and curing kinetics with diamines and flame-retardancy of resulting resins)

L28 ANSWER 8 OF 10 ZCAPLUS COPYRIGHT 2007 ACS on STN

1999:74467 Document No. 130:175036 Manufacture of optical device elements. Imamura, Saburo; Tomaru, Akira; Kurihara, Takashi (Nippon Telegraph and Telephone Corp., Japan). Jpn. Kokai Tokkyo Koho JP 11023886 A 19990129 Heisei, 10 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1997-178599 19970703.

AB The manufg. process comprises the steps of: forming a mold having a rectangular groove with a step-up central segment; placing a pair of optical fibers into the groove with the ends facets at the steps; filling the gap between the facets with a 1st photopolymerizable liq.; forming the coupling core by polymerizing the 1st liq.; coating the coupling core with a 2nd photopolymerizable liq., where the liqs. are typically (silicone) epoxy oligomers.

IT 220341-23-1 220341-25-3  
(manuf. of optical device elements)

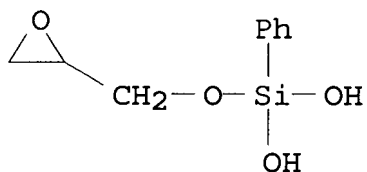
RN 220341-23-1 ZCAPLUS

CN Silanediol, (oxiranylmethoxy)phenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

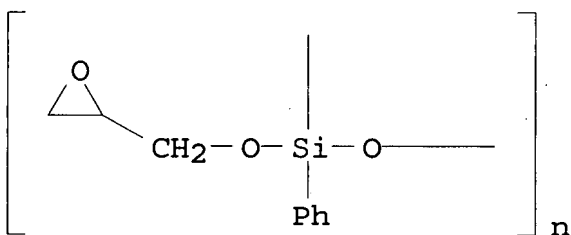
CRN 220341-22-0

CMF C9 H12 O4 Si



RN 220341-25-3 ZCAPLUS

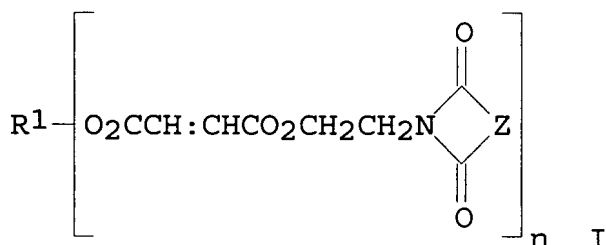
CN Poly[oxy[(oxiranylmethoxy)phenylsilylene]] (9CI) (CA INDEX NAME)



IT 220341-23-1 220341-25-3  
(manuf. of optical device elements)

L28 ANSWER 9 OF 10 ZCAPLUS COPYRIGHT 2007 ACS on STN  
1984:23332 Document No. 100:23332 Thermoreactive impregnating  
varnishes without solvent. Sidorenko, K. S.; Khofbauer, E. I.;  
Zinin, E. F.; Dulitskaya, G. M.; Grigor'ev, P. I. (USSR). Rom. RO  
78751 A1 19820430, 12 pp. (Romanian). CODEN: RUXXA3. APPLICATION:  
RO 1979-97946 19790625.

GI



AB Elec. insulating impregnating varnishes with improved heat resistance and storage stability contain unsatd. oligoester imide I (R = substituted or unsubstituted divalent arom. or alicyclic moiety, R<sup>1</sup> = polyepoxy moiety, n = 2 or 3) 40-65, polymerizable diluent (e.g. styrene [141-43-5]) 35-55, free radical catalyst 0.5-3.5, accelerator 0.05-0.5, inhibitor 0.001-1 part, and optionally 0.04-1.3 parts S-contg. compds. (heterocyclic thiol derivs., di- and polysulfides or org. sulfo acid derivs.) and/or 2-10 parts unsatd. hydroxy esters of (meth)acrylic acid, and/or 5-20 parts elastic unsatd. polyester. Thus, a glass fiber fabric was impregnated with a compn. contg. I (prepd. by condensation of a mixt. of N-(2-hydroxyethyl)-cis-methyltetrahydrophthalimide, maleic anhydride, and low-mol.-wt. dian epoxy resin at a 1:0.5:0.5 mol ratio) 55, styrene 40.95, tert-Bu perbenzoate 1, Bz2O2 0.5, p-benzoquinone 0.05 and Co naphthenate (10% in styrene) 2 parts, to give a sheet molding compd. which, after curing 10-15 min at 80-180°, resisted 180° heat for 30,000 h and had good dielec. properties.

IT 88291-38-7  
(oligomeric, styrene-curable, elec. insulating varnishes)

RN 88291-38-7 ZCAPLUS

CN 2-Butenedioic acid (2Z)-, mono[2-(1,3,3a,4,7,7a-hexahydromethyl-1,3-dioxo-2H-isoidol-2-yl)ethyl] ester, polymer with tris(oxiranylmethoxy)phenylsilane (9CI) (CA INDEX NAME)

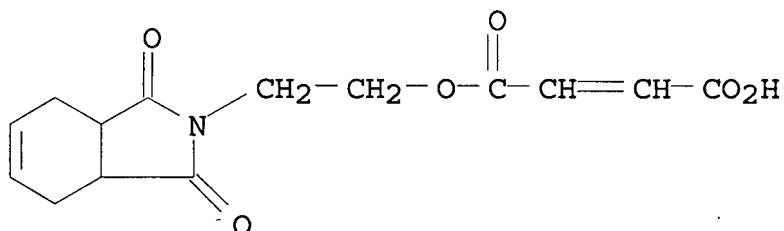


CM 1

CRN 88291-37-6

CMF C15 H17 N O6

CCI IDS

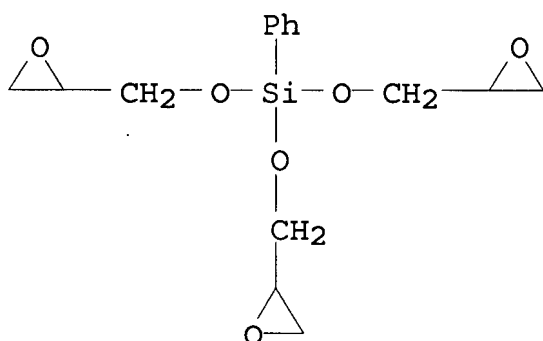


D1-Me

CM 2

CRN 6717-64-2

CMF C15 H20 O6 Si



IT 88291-38-7

(oligomeric, styrene-curable, elec. insulating varnishes)

L28 ANSWER 10 OF 10 ZCAPLUS COPYRIGHT 2007 ACS on STN

1981:122386 Document No. 94:122386 Heat resistance of solidified glycidylloxysiloxanes and glycidylloxysilanes. Bazhenova, T. S.; Zhdanov, A. A.; Annenkova, N. G. (Nauchno-Issled. Inst. Plastmass, Moscow, USSR). Khimicheskaya Promyshlennost, Seriya: Proizvodstvo i Pererabotka Plastmass i Sinteticheskikh Smol (6), 28-9 (Russian)

1980. CODEN: KPSSDO. ISSN: 0131-5439.

AB The heat resistance of solidified glycidylloxysiloxanes (I) and glycidylloxysilanes was comparatively evaluated by several different methods. The glass-transition temps. obtained by the thermomech. method for phenylglycidylloxysiloxanes ES-9 and ES-9-E, methylglycidylloxysiloxane ESM-10, and phenyltriglycidylloxysilane (cured with methyltetrahydrophthalic anhydride [26590-20-5]) were 110-30°, which correlated well with the heat resistance data obtained by the Vicat method (135°, ES-9-E) and by the Martens method (60°, ES-9-E). The heat resistance was also evaluated by measuring the hardness of solidified I subjected to heat aging. The hardness of I did not change during 1000 h heat aging at 200°, but began to decrease after 72 h at 250° and was higher for I prepd. in the presence of 0.3-0.5% chlorosilane catalysts or completely purified from alkali catalyst residues.

IT 77023-61-1

(thermal stability of anhydride-crosslinked)

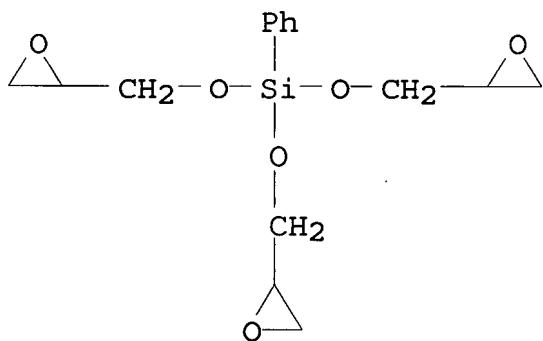
RN 77023-61-1 ZCAPLUS

CN Silane, tris(oxiranylmethoxy)phenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 6717-64-2

CMF C15 H20 O6 Si



IT 77023-61-1

(thermal stability of anhydride-crosslinked)